

NARROW FIELD ABSTRACT META-DATA IMAGE COMPRESSION

ABSTRACT OF THE DISCLOSURE

An image compression technique in which patterns identified, the
5 means of separating the image components, the parameterization of the
patterns, and the lower level numerical encodings are all designed around a
narrow class of images, such as two-dimensional projections of three-
dimensional visualizations of data generated by numerical weather
simulations. The process analyzes an image in terms of perceptual constructs
10 of the human visual system and searches for patterns among analyzed
abstractions of the image. The image is then described in terms of the
perceptual constructs and the patterns found among them. The image is re-
represented by describing the image as a collection of parameterized versions
of the patterns prevalent in that class of image. A resulting description is taken
15 outside of the context of abstract patterns. Redundancies in the description are
looked for and the data is re-represented so as to eliminate the redundancies
and compress the description.